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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/859,706	05/17/2001	Robert B. Chaffee	C0852/7014 JNA	4125

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WOLF GREENFIELD & SACKS, PC  
FEDERAL RESERVE PLAZA  
600 ATLANTIC AVENUE  
BOSTON, MA 02210-2211

EXAMINER
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SALDANO, LISA M

ART UNIT	PAPER NUMBER
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3673

DATE MAILED: 09/11/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/859,706

Applicant(s)

CHAFFEE, ROBERT B.

Examiner

Lisa M. Saldano

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 May 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## DETAILED ACTION

### *Drawings*

1. New corrected drawings are required in this application because of copy machine marks, poor legends, illegible characters, and improperly sized characters. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

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2. Claims 1-4, 5-7, 10 and 11 are rejected under 35 U.S.C. 102(e) as being anticipated by Chung (6,332,760).

Regarding claims 1-4, Chung discloses an inflatable device comprising a fluid impermeable bladder 26 and a fluid controller comprising an electrically powered pump 20 at least partly positioned within the bladder. A majority of the fluid controller is positioned within the bladder 26.

Regarding claims 5-7, Chung discloses the inflatable device described above wherein the fluid controller comprises a housing with a flange (see Fig. 2) that connects to the bladder 26.

Regarding claim 10, Chung discloses that a remainder of the fluid controller 20 is constructed and arranged to be removable from the flange.

Regarding claim 11, Chung discloses the inflatable device described above wherein the fluid controller comprises a first locking mechanism 24 and an adjustment device on pump 20 which includes a second locking mechanism sized and adapted to mate with the first locking mechanism on 24.

3. Claim 19 is rejected under 35 U.S.C. 102(b) as being anticipated by Sexton (5,068,933). Sexton discloses an air comfort pillow, which is an inflatable device. The device comprises a fluid controller 21 comprising an electrically powered pump 23 and an inflatable device 11. The fluid controller is connected to the inflatable device such that the exterior profile of both is essentially the same as the exterior profile of the inflatable device 11.

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4. Claims 20, 22, 23, 25 and 26 are rejected under 35 U.S.C. 102(e) as being anticipated by Chung (6,332,760).

Regarding claim 20, Chung discloses an inflatable system comprising an impermeable bladder 26 and fluid controller with a pump 20 in communication with the bladder. Chung discloses a first locking mechanism at the perimeter of socket 24. Chung further discloses an adjustment device near 204 on the top portion of 20 wherein a second locking mechanism located along the lower perimeter of pump 20 mates with the locking mechanism of socket 24.

Regarding claims 22, 23, and 25, Chung discloses the inflatable system wherein the pump 20 is electrically powered and a majority of the controller is positioned in the bladder (see Figs. 3A, 3B). Furthermore, Chung's system comprises a recess to accommodate at least a portion of the pump.

Regarding claim 26, Chung discloses a pump 20 within a housing wherein the housing includes a flange that connects to the bladder (see Fig 2).

### *Claim Rejections - 35 USC § 103*

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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6. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chung as applied to claim 2 above, and further in view of Graf (5,746,873).

Chung discloses the inflatable device as described above. However, Chung fails to disclose that substantially all of the controller is positioned within the bladder. Graf discloses an air mattress comprising a pump assembly that is substantially all disposed within the bladder of the air mattress (see Fig. 3).

It would have been obvious to one of ordinary skill in the art to use Graf's teaching of submerging the pump assembly within an inflatable device such as Chung's because substantially submerging the mechanical assembly removes hard and uncomfortable portions of the device from the contact of the user. This configuration provides a greater possibility of comfort as well as safety because unsafe electrical and mechanical portions of the device would also be concealed.

7. Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chung as applied to claim 7 above, and further in view of Mackal et al (3,995,653). Chung discloses the inflatable device as described above. However, Chung fails to disclose that the flange comprises a fluid impermeable wall. Mackal et al disclose an inflation device, wherein the device comprises an annular flange 17 that connects to a housing 20 of the inflatable device. Furthermore, Mackal et al disclose that the flange connects to the housing at an outlet 34 of the housing.

It would have been obvious to one of ordinary skill in the art to combine the Chung's inflatable device invention with the flange teachings of Mackal et al because the flange provides a multipurpose function of enclosing the controller housing while keeping that portion of the

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device sealed from air or fluid leaks. The flange essentially serves as a seal, which is a common attribute of inflatable devices.

8. Claims 12-14 and 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chung as applied to claims 1 and 11 above, and further in view of Sexton (5,068,933). Regarding claims 12-14 and 16-18, Chung discloses the inflatable device as described above. However, Chung fails to disclose that the device comprises first and second switches. Sexton discloses an air comfort pillow with controller wherein the pillow comprises a first switch 57 electrically connected to energize a pump 23 and a second switch 59 electro-mechanically connected to a valve 61 to control air passage through the valve. The switches are located in fixed proximity to each other on the top of an adjustment device or control box 53. Sexton also discloses that the adjustment device contains a button 59 that actuates a plate member 65 in concert with a tube or stem 51 and moves the valve between an open and closed position.

It would have been obvious to one of ordinary skill in the art to combine Chung's inflation device with the switch and valve teachings of Sexton because inflation devices commonly have separate valves used to deflate the bladder when desired. Furthermore, a separate switch is commonly used to actuate the deflation valve, just as a precaution to avoid undesired or accidental valve deflation.

9. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chung and Sexton as applied to claim 14 above, and further in view of Schmidt. Chung and Sexton disclose features of inflation devices as described above. However, neither Chung nor Sexton disclose the

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use of a solenoid in the devices. Schmidt discloses an inflation device for use as an automotive seat wherein the device comprises a solenoid valve 132a for fluid control.

It would have been obvious to one of ordinary skill in the art to combine the inflation device invention of Chung with the solenoid valve teaching of Schmidt because as previously mentioned, inflation devices typically have a separate deflation valve for collapsing the bladder. Furthermore, users typically want to deflate devices easily with as few steps as possible. The addition of a solenoid switch to the deflation valve provides an easy and fast means to actuate deflation of the device.

10. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chung as applied to claim 20 above, and further in view of Sexton. Chung discloses features of an inflation device as described above. However, Chung fails to disclose dual switches and valves. Sexton discloses an inflation device comprising a first switch 57,55, which has a first and second position, is located on the top portion of adjustment device 53, and is electrically connected to a motor 31 and power source 33. Sexton further discloses a second switch 59 also positioned at the top portion of an adjustment device and mechanically connected to valve 61.

It would have been obvious to one of ordinary skill to combine Chung's inflatable device with the switch and valve features as taught by Sexton because the switches provided on an easily accessible adjustment device provide convenience for the device user. Furthermore, the separate valve and actuating switch provide a simple and quick way to deflate the device, but also safeguard the device from being accidentally deflated by requiring the user to actuate the deflation valve through the separate switch.



11. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chung as applied to claim 23 above, and further in view of Graf (5,746,873). Chung discloses features of an inflation device as described above. However, Chung fails to disclose that substantially all of the fluid controller is positioned within the inflation device's bladder. Graf discloses an air mattress comprising a pump assembly that is substantially all disposed within the bladder of the air mattress (see Fig. 3).

It would have been obvious to one of ordinary skill in the art to use Graf's teaching of submerging the pump assembly within an inflatable device such as Chung's because substantially submerging the mechanical assembly removes hard and uncomfortable portions of the device from the contact of the user. This configuration provides a greater possibility of comfort as well as safety because unsafe electrical and mechanical portions of the device would also be concealed.

12. Claims 27 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sexton (5,068,933), in view of Schmidt (5,893,609). Sexton discloses an inflation device comprising a substantially impermeable bladder 11 and a fluid controller comprising a first switch 57,55, which has a first and second position, is located on the top portion of adjustment device 53, and is electrically connected to a motor 31 and power source 33. Sexton further discloses a second switch 59 also positioned at the top portion of an adjustment device and mechanically connected to valve 61. The fluid controller has an electrically powered motor 31. Sexton also discloses air valve construction wherein a leaf spring biases a plate and tube to prevent air escape from a tube,

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thereby seal sealing the air valve assembly. However, Sexton fails to disclose that the device has a solenoid.

Schmidt discloses an inflation device for use as an automotive seat wherein the device comprises a solenoid valve 132a for fluid control (see column 5, lines 55-68). Furthermore, Schmidt discloses another valve arrangement/ assembly wherein a switch connected to the valve may have two positions. In one position the switch acts to unseat a movable stem of a valve opening the valve to the atmosphere. The other position allows the spring-biased stem to close and reseal itself to seal the airline, thereby self-sealing itself (see column 5, lines 58-68).

It would have been obvious to one of ordinary skill in the art to combine Sexton's inflatable device with Schmidt's switch and valve teachings because the solenoid switches provide a simple and easy way to control the inflation and deflation of the device. Furthermore, both Schmidt's and Sexton's teachings of the spring biased self-sealing valves further safeguard the device from deflating accidentally.

### *Conclusion*

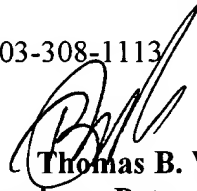
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lisa M. Saldano whose telephone number is 703-605-1167. The examiner can normally be reached on Monday-Friday, 8:30am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Heather C. Shackelford can be reached on 703-308-2978. The fax phone numbers

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for the organization where this application or proceeding is assigned are 703-305-7687 for regular communications and 703-305-7687 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113



**Thomas B. Will**  
**Supervisory Patent Examiner**  
**Group Art Unit 3671**  
**for Heather Shackelford**

lms  
September 9, 2002